

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7: WO 00/18180 (11) International Publication Number: H04R 1/02, 7/04, 9/06 **A1** (43) International Publication Date: 30 March 2000 (30.03.00)

(21) International Application Number:

PCT/FI99/00767

(22) International Filing Date:

17 September 1999 (17.09.99)

(30) Priority Data:

982007

17 September 1998 (17.09.98) FI

(71) Applicant (for all designated States except US): ANTURI-LAAKSO OY [FI/FI]; Hyttikuja 25, FIN-85560 Nivala (FI).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): NOPONEN, Seppo [FI/FI]; Hyttikuja 25, FIN-85560 Nivala (FI). HINTSALA, Tapani [FI/FI]; Rautakoskentie 152, FIN-85150 Typpö
- (74) Agent: KESPAT OY; P.O. Box 601, FIN-40101 Jyväskylä

(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, ŁT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

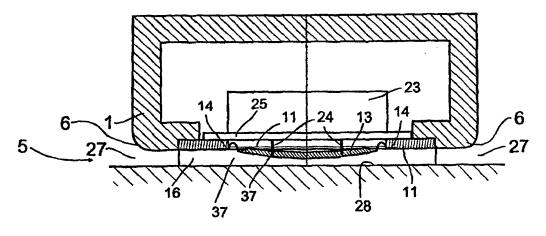
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF,

BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN,

Published

With international search report. With amended claims. In English translation (filed in Finnish).

(54) Title: METHOD FOR SOUND REPRODUCTION AND PILLAR LOUDSPEAKER



(57) Abstract

The invention relates to a method for sound reproduction and a loudspeaker, in which a vibrating diaphragm (13) controlled by an operating device (21, 50) produces sound in the air surrounding it on the first side, and in which so-called acoustic feedback is prevented by preventing the passage of the air over the edge of the diaphragm to its other side, and in which the air transports the sound to the surrounding free space. The aforesaid diaphragm is formed as a uniformly vibrating, essentially straight and high element, so that the height H of diaphragm (13) is at least three times, and preferably at least five times its width W. Preferably, an essentially closed chamber (9) is formed in front of diaphragm (13), except for a port arrangement (5), in which one or more ports (27, 45) essentially corresponding to the height of the diaphragm permit the passage of air and thus of sound from enclosure (9) to the free space.